

Zbornik Instituta za kriminološka  
i sociološka istraživanja  
2019 / Vol. XXXVIII / 1 / 23-38  
Originalni naučni rad  
Priljeno: 15. februara 2019. godine  
UDK:

## FURTHER DEVELOPMENT OF THE SHORT PSYCHOPATHY RATING SCALE\*

Janko Međedović\*

Institute of criminological and sociological research, Belgrade, Serbia

Emilija Romić, Nevena Batinić, Ognjen Filipović, Đorđe Bašić  
Faculty of media and communication, Belgrade, Serbia

Svetlana Pavlović, Nevena Mijatović, Đorđe Cupać  
Faculty of philosophy, University of Belgrade, Serbia

*In the present work we describe the further development of the Short Psychopathy Rating Scale (SPRS), a 9 item inventory for measuring three psychopathy traits: Deceitfulness, Emotional coldness and Recklessness. We administered this inventory on a sample of 210 students (76% females,  $M_{age}=21.21$ ;  $SD=2.10$ ) who rated their parents on psychopathic traits. Analyses were conducted on 373 participants (54% females,  $M_{age}=51.47$ ;  $SD=5.91$ ). We calculated Cronbach's  $\alpha$  coefficient as a reliability estimate, tested the latent structure of the construct using Confirmatory Factor Analysis (CFA) and explored the validity of the SPRS scales by examining their relations with Triarchic Psychopathy Measure. Psychopathy scales showed acceptable reliabilities, having in mind that all scales consisted of 3 items (as in range from .60 to .68). CFA showed good fit for the SPRS model:  $\chi^2(24)=85.57$ ;  $p<.01$ ;  $NFI=.88$ ;  $CFI=.91$ ;  $RMSEA=.078$ . Predictable sex differences were found - males had significantly higher scores on all three psychopathy traits. Finally, the validity of the SPRS scales was determined by establishing relations with psychopathy traits of*

---

\* This paper is a result of research Project "Crime in Serbia: phenomenology, risks and the possibilities of social intervention" (47011), financed by the Ministry of Education, Science and Technological Development of Republic of Serbia.

\* E-mail: janko.medjedovic@fmk.edu.rs

*Triarchic Psychopathy Measure: Meanness, Boldness and Disinhibition. Deceitfulness showed unique relations with Boldness, Emotional coldness with Meanness, and Recklessness with Disinhibition, as expected. In sum, SPRS measures showed acceptable reliabilities, adequate factor structure and excellent convergent and divergent validity. However, there is still room for improvement, especially in elevating scale reliabilities.*

**KEYWORDS:** *psychopathy / rating method / validity / factor structure / reliability*

## INTRODUCTION

### 1. THE CONCEPT OF PSYCHOPATHY

Psychopathy has intrigued and puzzled researchers and practitioners for decades. The reason lies in the peculiar psychological makeup and immoral behavior characterized by the psychopathic personality. Psychopathy gained attention as a psychopathological phenomenon at first. It was described using terms such as dishonesty, lack of guilt, shame, insight and learning by experience, egocentricity, inability to follow long-term goals, antisocial behavior, but an absence of psychopathological symptoms as well (Cleckley, 1941; 1946). Afterwards, researchers recognized the antisocial outcomes of psychopathy as the ones with the most detrimental consequences for society in general. This is why psychopathy was examined mostly in the context of criminal behavior where it has been found to be related with many aspects of criminal behavior. For instance, psychopathy is positively associated to criminal recidivism (Leistico, Salekin, DeCoster, & Rogers, 2008), violent offences characterized by premeditation and a lack of emotional motivation for a crime (Woodworth & Porter, 2002), problematic behavior of convicts in the institution (Campbell, French, & Gendreau, 2009), etc. Finally, in the last 15 years psychopathy has been investigated in a general population as well (Paulhus & Williams, 2002). This was the consequence of the findings showing that psychopathy characteristics exist in a general population too and that they are related to a wide range of phenomena from everyday life. For example, psychopathy is positively related to various forms of aggressiveness (Warren & Clabour, 2009) and violence (Gray, Hill, McGleish, Timmons, MacCulloch & Snowden, 2003), with the complex relations (both positive and negative) with lying (Porter, ten Brinke, & Wallace, 2012), intelligence (Vitacco, Neumann & Wodushek, 2008) and psychopathology (Benning, Patrick, Salekin, & Leistico, 2005).

It is important to mention that, despite several decades of empirical measurement of psychopathy, there are still disputes regarding its definition in the first place. For example, some authors believe that the impulsive and reckless behaviors together

with the antisocial tendencies are the core features of psychopathy (Hare & Neumann, 2009). Others think that antisocial traits are not the crucial features of psychopathy but its correlates or possible behavioral consequences (Cooke, Michie, Hart, & Clark, 2004; Cooke, Michie, & Skeem, 2007). Some argue that even impulsive, erratic and imprudent behavior is not a central feature of psychopathy (Boduszek & Debowska 2016). Furthermore, it is disputed whether a lack of cognitive empathy is a central psychopathy trait or its correlate (Međedović, Bulut, Savić & Đuričić, 2018). Finally, researchers disagree about the number of traits which is optimal to describe psychopathy with the models usually ranging from one to four psychopathy facets (Hare, 2003; Cooke et al., 2003; 2007; Međedović, Petrović, Kujačić, Želeskov-Đorić, & Savić, 2015). Of course, there is a certain agreement about the central psychopathy features (usually comprising some forms of affective callousness and coldness, manipulation and exploitation of others, and disinhibition/lack of impulse control) but it is important to keep in mind this heterogeneity in conceptual models of psychopathy because it can be the cause of heterogeneity in empirical findings as well.

## 2. MEASURING PSYCHOPATHY: ONE RATING AND MANY SELF-REPORT INSTRUMENTS

Historically, the measuring of psychopathy was based on a rating method. The most prominent instrument for psychopathy assessment was the Psychopathy Check List (Harpur, Hakstian, & Hare, 1988) and its revised version (PCL-R: Hare, 2003). It is based on a structured interview conducted by an educated professional and the target individuals usually belong to convict or forensic populations since the method requires some form of additional data about the rated individual which is extracted from prison files and dossiers. Afterwards, the interviewer rates the target person on 20 psychopathy indicators distributed among four scales: Interpersonal, Affective, Lifestyle, and Antisocial. The scale has its short form (Hart, Cox, & Hare, 1995) and a variant which is adequate for the psychopathy assessment of adolescents (Forth, Kosson, & Hare, 2003).

On the other hand, many self-report measures of psychopathy have been developed. Some of them rely on the PCL-R as a conceptual framework with the psychopathy traits closely resembling those of PCL-R (Levenson, Kiehl, & Fitzpatrick, 1995; Paulhus, Neumann, & Hare, 2016). Others rely on different conceptual frameworks with a lesser focus on antisocial behavior (Lilienfeld & Andrews, 1996; Patrick, Fowles, & Krueger, 2009) or even discounting impulsive and erratic behavior as well (Boduszek, Debowska, Dhingra, & DeLisi, 2016). All of the previously mentioned inventories are multidimensional - they assess psychopathy as a syndrome of several narrow traits. There are also unidimensional measures of psychopathy. These inventories demand special caution in interpreting their results since they tend to capture slightly different constructs: for example some measures are focused on affective callousness (like in Dirty Dozen inventory: Jonason & Webster, 2010) while others measure impulsive behavior and vengefulness (like in Short Dark Triad

inventory: Jones & Paulhus, 2014). These unidimensional measures of psychopathy are administered as a part of the inventories which measure the so-called Dark Triad of personality – psychopathy, Machiavellianism and narcissism (Paulhus & Williams, 2002).

### 3. THE DEVELOPMENT OF SHORT PSYCHOPATHY RATING SCALE (SPRS)

The lack of rating scales for measuring psychopathy represents an unusual state of affairs in the field. The reason behind this is a critique of many authors that self-report measures are prone to socially-desirable responding which would reflect in underscoring psychopathy levels (e.g. MacNeil & Holden, 2006). On the other hand, the PCL-R and its derivatives have several limitations which are especially prominent in a research context: 1) the protocol depends on external information about the rated person, so it is applicable only in institutional settings; 2) the assessment is time-consuming – over 1 hour per participant; 3) the rater must be a skilled professional; 4) it cannot be administrated to a group of participants - the rater can work with only one participant per administration, etc. This is why the work on a short rating measure which can be used by non-professional raters had begun. The instrument was named the Short Psychopathy Rating Scale (SPRS) and it was intended to measure three psychopathy traits - *Deceitfulness* (lying and conning followed by high self-esteem), *Emotional coldness* (lack of emotional empathy, guilt, and general affective shallowness) and *Recklessness* (impulsivity, irresponsibility, elevated risk proneness). These three traits are recognized as the common content in the majority of contemporary models of psychopathy - the content of the following models was analyzed: PCL-R (Hare, 2003), Self Report Psychopathy scale (SRP 4: Paulhus et al., 2016); Psychopathic Personality Inventory (Lilienfeld & Andrews, 1996), Levenson Self Report Psychopathy scale (LSRP: Levenson et al., 1995), Triarchic Personality Measure (TriPM: Patrick et al., 2009) and Psychopathic Personality Traits Scale (PPTS: Boduszek et al., 2016). By operationalizing only the common content of existing psychopathy measures we obtained face validity of the new psychopathy scale. The instrument acquired initial validation and showed potential for further use in empirical research (Međedović & Petrović, 2018).

### 4. GOALS OF THE PRESENT STUDY

Rating measures are very useful in the research of individual differences and they may be especially convenient in the field of psychopathy due to a potential bias of self-report measures towards socially desirable responding. This is the reason why we continued working on the development of the SPRS scale. The main course of the present development of the scale was based on including the reverse-coded items in the scale and providing construct validation by examining the relations with existing psychopathy scales. TriPM model (Patrick et al., 2009) was used for the validation

process. It comprises three psychopathy characteristics: Boldness (resilience to stress, lack of fear, and high self-assurance), Meanness (decreased emotional empathy, emotional callousness and premeditated aggression) and Disinhibition (impulsiveness, irresponsibility, and externalizing behavior). Based on the content of TriPM traits we set exact hypotheses of the relations between SPRS and TriPM measures (this was the main reason why we used TriPM in the validation process – the fact that we could assume exact relationships between SPRS and TriPM scales): 1) Deceitfulness should be mostly related to Boldness; 2) Emotional coldness should share most of its variance with Meanness and 3) Recklessness and Disinhibition should tap to similar psychological processes.

## 5. METHOD

### 5.1. Sample and procedure

The primary sample consisted of university students from several colleges belonging to the University of Belgrade and Singidinum University in Serbia (N=210; 76% females;  $M_{age}=21.21$ ;  $SD=3.75$ ). They were asked to fill in a questionnaire with the notion that some of the questions referred to the personality traits of their parents: these items were the indicators of SPRS. They also obtained another set of questionnaires which they gave to their parents to fill in. All students took part in the research on a voluntary basis, after the precise information how the procedure would look like. They received additional points on the psychology course they attended during the time of data gathering as motivation for participating in the research. The sample of parents consisted of 373 individuals. There were 202 males ( $M_{age}=52.64$ ;  $SD=6.54$ ) and 171 female participants ( $M_{age}=50.50$ ;  $SD=4.25$ ). The education level in the sample of parents was higher than average in Serbia: most of the participants had finished college (52%), followed by the ones with a high school education (30%). These participants provided self-reports on existing psychopathy measures (TriPM). Parents were also provided with the information that participation in the research is voluntary. All questionnaires had precise instructions for filling in the inventories. After responding on questionnaire items, both parents and students put the questionnaires in envelopes and sealed them, assuring the anonymity of responses. The students entered an identical code on the envelopes which belonged to the same family so the data could be merged.

### 5.2. Measures

The key measure of the present research was the Short Psychopathy Rating Scale. It assesses three psychopathy characteristics: Deceitfulness, Emotional coldness and Recklessness (Međedović & Petrović, 2018). We measured every trait via five items. We show all of administered items on the list below. However, as the readers will see later in the text, the optimal model could not be obtained with all of the inventory items: some items needed to be excluded from the model. We marked the excluded

items with the \* sign. The instructions for students were as follows: "Please rate to what extent your mother/father exhibits each of the following characteristics. The numbers on the response scale designate the following: 1. The characteristic is absent; 2. The characteristic is present to a small extent; 3. The characteristic is present to a moderate degree; 4. The characteristic is present to a high degree; 5. The characteristic is present to a very high degree." These are the administered items of SPRS (reversely coded items are marked by R):

#### Deceitfulness:

- d1. The interests of other people are more important to him/her than his/her own. (R) \*
- d2. He/She has a high opinion of himself.
- d3. He/She manipulates others.
- d4. He/She charm others to come to what he/she wants.
- d5. He/she is not of a greedy nature. (R) \*

#### Emotional coldness:

- ec1. He/She rarely shows a feeling of guilt.
- ec2. He/She feel compassion with others when they feel bad. (R)
- ec3. He/She is an emotionally cold person.
- ec4. He/She often feels tense and upset. (R) \*
- ec5. He/She rarely shows the feeling of fear. \*

#### Recklessness:

- r1. He/She lives aimlessly, without making long-term plans.
- r2. He/She is a very responsible person. (R)
- r3. He/She works without delay and conscientiously. (R) \*
- r4. He/She lacks self-control. \*
- r5. He/She tends to enter unnecessary risks.

In order to estimate the validity of SPRS measures, the participants from the parental sample provided self-report measures on the Triarchic psychopathy traits (Patrick et al., 2009). It measures three psychopathy characteristics: Boldness, Meanness and Disinhibition. We administered the short version of this scale, the one where every trait is measured via 5 items (Mededović & Damjanović, 2018).

## 6. RESULTS

### 6.1. Obtaining the SPRS model with the best fit

First, we calculated fit indices of the model comprising all SPRS items which were administered. Since we had clear assumptions of the SPRS latent structure, we

performed confirmatory factor analysis of the SPRS items. However, such a model showed very poor fit. We advanced by removing the items that showed a detrimental effect to the model fit. This procedure resulted in removing two items per scale, so the final model contained nine items. The fit of these models was quite good:  $\chi^2(24)=85.57$ ;  $p<.01$ ; NFI=.88; CFI=.91; RMSEA=.078. The model itself, with the loadings of every retained item is shown in Figure 1.

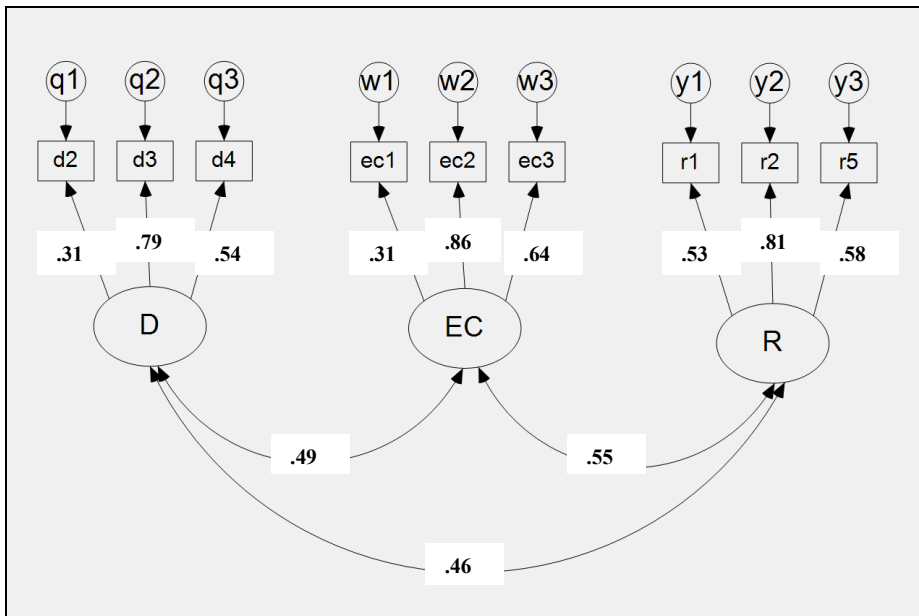


Figure 1: The best-fitting model of the SPRS

Notes: one-sided arrows represent standardized regression coefficients; two-sided arrows represent correlations between the latent factors; all estimates are significant on the p level  $p<.01$ ; item labels correspond to the ones presented in the Measures subsection; D - Deceitfulness; EC - Emotional coldness; R - Recklessness.

## 6.2. Descriptive statistics, reliabilities, sex differences and the correlations between the SPRS scales

Next, we showed the descriptive statistics, together with the sex differences in psychopathy traits. We calculated the Cronbach's  $\alpha$  coefficient as a measure of reliability for every scale. Finally, we calculated the correlation coefficients (Pearson coefficient of linear correlation) for every observed score, since CFA may overestimate the correlations between the latent variables. These results are shown in Table 1.

Table 1: Descriptive statistics, reliabilities, sex differences and correlations between the SPRS measures

	<i>M(SD)males</i>	<i>M(SD)females</i>	<i>t</i>	<i>α</i>		
Deceitfulness	2.39(0.83)	2.20(0.74)	2.29*	.60		
Emotional coldness	2.51(0.78)	1.90(0.66)	7.90 <sup>e</sup> **	.65	.31**	
Recklessness	1.82(0.70)	1.57(0.70)	3.12 <sup>e</sup> **	.68	.32**	.34**

Notes: \* -  $p < .05$ ; \*\* -  $p < .01$ . <sup>e</sup> - Levene's test was statistically significant.

As can be seen, the average scores on the scales are in the lower part of the measures' distributions - this applies especially to the Recklessness score. Males have higher scores on all psychopathy traits compared to females. Reliabilities of the scales are satisfactory having in mind that the scales comprise three items only. Finally, the correlations between the scales are all positive as expected but they are not too high in magnitude. In order to acquire a more precise look at the scale distributions we showed them graphically on Figure 2.

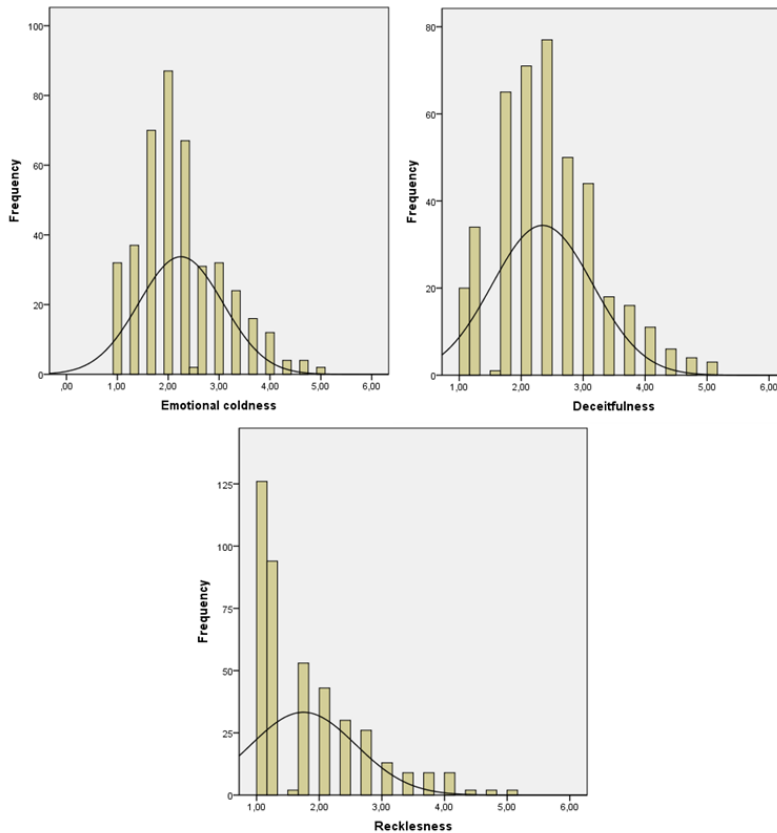


Figure 2: The distributions of the psychopathy scores

As can be expected, all distributions are positively skewed - this applies especially to Recklessness. The asymmetry lead to the fact that all three measures significantly deviate from the normal distribution:  $K-Sz=2.94$ ;  $p<.001$  for Deceitfulness;  $K-Sz=3.22$ ;  $p<.001$  for Emotional coldness and  $K-Sz=4.37$ ;  $p<.001$  for Recklessness.

### 6.3. Associations between the SPRS and the TriPM constructs

In order to explore the relations between the SPRS and the TriPM measures we set three regression models where SPRS scales were set as the predictors while TriPM measures were set as criteria variables. Participants' sex, age and education were controlled in the analysis as well in order to control possible confounds in the links between the analyzed variables. The results of the regression analyses are shown in Table 2.

Table 2: SPRS measures as the predictors of TriPM psychopathy scales

	Meanness		Boldness		Disinhibition	
	$\beta$	$r$	$\beta$	$r$	$\beta$	$r$
sex	-.13*	-.21**	-.16**	-.11*	-.07	-.10*
age	-.07	.02	-.18**	-.09	-.11*	-.07
education	-.04	-.01	.19**	.18**	-.10	-.16**
Deceitfulness	.03	.10	.24**	.23**	.08	.12*
Emotional coldness	.20**	.26**	-.02	.04	.00	.09
Recklessness	.07	.15**	-.08	-.06	.23**	.27**

Notes:  $\beta$  - standardized regression coefficient;  $r$  - zero order correlation between the predictor and the criterion; males were coded by 0 and females by 1; \* -  $p<.05$ ; \*\* -  $p<.01$ .

In Table 1 we can see that Meanness ( $R^2=.10$ ;  $F_{(6, 367)}=6.24$ ;  $p<.001$ ) was more expressed in males and it was positively predicted by Emotional coldness. Similarly, Boldness ( $R^2=.11$ ;  $F_{(6, 367)}=8.54$ ;  $p<.001$ ) was more pronounced in males, younger participants, the ones with higher education and the ones with elevated scores on the Deceitfulness trait. Finally Disinhibition ( $R^2=.10$ ;  $F_{(6, 367)}=6.69$ ;  $p<.001$ ) was negatively predicted by participants' age and positively by the ratings on the Recklessness trait. The percentage of criteria's explained variance was very similar for all traits: 10% for Meanness and Disinhibition and 11% for Boldness trait.

## 7. DISCUSSION

Considering the number of studies conducted in the field of psychopathy it is interesting that there were no systematic attempts to construct a rating scale for assessing psychopathy where laypeople can be raters. The only existing rating scale

for the assessment of psychopathy is PCL-R (Hare, 2003) and its derivatives (Forth et al., 2003; Steadman et al., 2000). Despite its validity and predictive power (it is often regarded as a "gold standard" in psychopathy assessment), this instrument has several limitations which seriously buffer its usage in empirical research: it is time consuming, demands a skilled interviewer, it is partially based on an external source of information about the target individual, and it is not suitable for group administration. Hence, it cannot be easily used in a research context, especially in long surveys where there is no space for scales with a large number of items. If we have a scale where lay individuals can be raters, this would immensely facilitate the research in psychopathy, using this type of methodology. The advantage is not only that the researchers can use raters from general populations, which are much easier to find, but to collect data in a group manner since in this case there can be a large number of raters instead of only several trained scholars. There is another reason why rating scales may be especially important and it regards the nature of psychopathy traits. It has been reasoned that self-report measures of psychopathy may be especially prone to distorted responses. The reason is twofold: 1) the core psychopathic trait is manipulation; therefore individuals high in psychopathy may intentionally tend to provide false responses on psychopathy items (MacNeil & Holden, 2006); 2) psychopathy is sometimes depicted by a lack of insight into one's own behavior (Jackson & Richards, 2007) so highly psychopathic individuals may not be able to accurately describe their characteristics<sup>1</sup>. Perhaps one of the reasons for the lack of effort in constructing rating methods for psychopathy assessment is the fact that this represents a complex task. The results of the present research confirm this, but offer promises for future studies as well.

### 7.1. Current phase of the Short Psychopathy Rating Scale research

Our goal was to construct a short, reliable and valid rating measure of psychopathy which could be used by layman raters in empirical research. Our starting point was to test 15 items focused on measuring three psychopathy characteristics that have been described in every conceptualization of psychopathy: manipulative and deceitful tendencies, emotional superficiality based on lack of affective empathy and erratic and impulsive behavior (Cooke et al., 2004; Hare, 2003; Lilienfeld & Andrews, 1996; Patrick et al., 2009). These traits have been labeled as Deceitfulness,

---

<sup>1</sup> This said, it must be added that we believe this problem in psychopathy assessment has been overemphasized. First, the results of meta-analysis showed that self-report psychopathy scores are not related to any style of response distortion, including faking good and faking bad (Ray, Hall, Rivera-Hudson, Poythress, Lilienfeld, & Morano, 2013). Secondly, it has been shown that heightened psychopathic traits are not characterized by a lack of insight, since there is relatively good convergent validity between self-report and rating measures of psychopathy (Miller, Jones, & Lynam, 2011; but see also Kujčić, Međedović, & Knežević, 2015 for the opposite findings). Finally, the data of theoretically congruent relations between psychopathy and various external criteria, with many of them being operationalized as objective measures (Međedović, 2015), speaks in favor of the validity of self-report psychopathy measures.

Emotional coldness and Recklessness in the present model. The first version of the scale contained items that were all reflected in the direction of the measurement object, i.e. there were no reverse coded items (Međedović & Petrović, 2018). This could elevate the acquiescence bias in responding so we turned two items per scale opposite to the measurement object in the present version of the instrument. However, the present set of items did not achieve adequate model fit when all of the items were included in the analysis. Note that both reverse coded items needed to be excluded from the Deceitfulness scale in order to maximize fit; one reversed and one directly reflected item per Emotional coldness and Recklessness were also removed. The exact reason why these specific items decreased model fit has yet to be established. This in turn reflected on the scale reliabilities which turned out to be lower than expected. However, we should acknowledge that the magnitude of  $\alpha$  coefficients (.60 to .68) is quite satisfactory having in mind that the scales comprise three items only.

It is also evident that the scores on psychopathy traits are positively asymmetric, which deviated the assumption of normal distribution of the scores. We do not see this as a major problem: psychopathy traits are present in the general population but we can hardly expect normal distribution of the traits depicting manipulation and exploitation of others, together with the lack of empathy and guilt. These are relatively rare traits and their general frequency in the population must effect the distributions of the scales. However, we do believe that the skewness of the Recklessness scale is too large to be ignored, especially because the core basis of this trait is impulsiveness, which should be relatively normally distributed in the general population. This means that the items for Recklessness scales must be chosen in a way that they reflect more common variants of impulsive and careless behavior.

Our results met expectations when the validity of scales is in question. In fact, all of the data regarding validity showed very good performance of SPRS measures. First, with the removal of two items per scale, the obtained model showed quite satisfactory fit, comparing to the usual standards in psychological science (Hu & Bentler, 1999). Secondly, the expected sex differences in psychopathy were detected: males scored higher on all three psychopathy traits. It has been reliably demonstrated that psychopathy is more present in males than females (Cale & Lilienfeld, 2002), possibly because it is more adaptive for males especially in the context of mental health (Međedović, Wertag, & Sokić, 2018). Finally, and most importantly, SPRS measures showed expected relations with TriPM scales. Emotional coldness showed a distinctive association with Meanness, Boldness with Deceitfulness, while Recklessness was primarily associated with Disinhibition. In other words, the results of the external validity analysis completely confirmed the hypotheses we set. Hence, it can be reliably said that SPRS constructs measure the intended psychological traits based on manipulation, lack of compassion and difficulties in behavioral control. We may say that SPRS performs similarly to the PCL-R based instruments in this context: the associations between SPRS scales and TriPM are similar to the ones between PCL-SV and TriPM (Sellbom, Laurinavičius, Ustinavičiūtė, & Laurinaitytė, 2018). In fact, according to some findings, SPRS

outperforms PCL-R: there are studies which failed to find an association between TriPM Meanness and PCL-R Affective factor, which is unexpected since these two scales should represent complementary measures (Venables, Hall, & Patrick, 2014).

It may seem that the strength of the associations between the scales is too low to corroborate the assumption of validity. However, we should have in mind that the scores are obtained via different methodology. As a consequence, there is diminished method covariance, which is a trivial covariance between the measures generated by the mono-method design (Blonigen et al., 2010). In fact, the strength of associations is very similar to the existing data where rating and self-report measures of psychopathy were collected (e.g. Hall, Drislane, Patrick, Morano, Lilienfeld, & Poythress, 2014; Poythress, Lilienfeld, Skeem, Douglas, Edens, Epstein, & Patrick, 2010). Nevertheless, we must add that these associations would be probably higher in magnitude if the reliabilities of the SPRS subscales would be higher. This remains the task for future research. In sum, we believe that the present results of SPRS validity are convincing and promising.

## 7.2. Limitations, future directions and conclusion remarks

Rating measures have several advantages which make them very useful in the field of individual differences research. They can provide information on the target person's behavior without being susceptible to biases characteristic for self-report measures. Despite the fact that they are very short measures for assessing personality and behavioral traits (containing only one or two items per construct: Rammstedt & John, 2007; Robins, Hendin, & Trzesniewski, 2001), which make them suitable for long surveys, our goal in the next phase of SPRS development is to elevate the number of items per scale. The ideal number of items should be six or seven markers: this would elevate the reliability of the scales without taking too much space in the survey. Building on present and previous work in SPRS, perhaps the best strategy is to start from a higher number of items and to extract the ones which provide the best fit to the data. This will positively reflect on the scales' reliabilities which is certainly the main limitation of the SPRS's present version. Certainly, it would be useful to apply other measures of psychopathy and the dark personality traits in general to the validation process. The present findings certainly encourage us to continue with this task, especially the data regarding the SPRS validity. The development of a short and reliable psychopathy rating scale would certainly benefit many researchers who study this phenomenon.

## REFERENCES

- (1) Benning, S. D., Patrick, C. J., Salekin, R. T., & Leistico, A. M. R. (2005). Convergent and discriminant validity of psychopathy factors assessed via self-report: A comparison of three instruments. *Assessment*, 12, 270-289.  
<https://doi.org/10.1177%2F1073191105277110>

- (2) Blonigen, D. M., Patrick, C. J., Douglas, K. S., Poythress, N. G., Skeem, J. L., Lilienfeld, S. O., ... & Krueger, R. F. (2010). Multimethod assessment of psychopathy in relation to factors of internalizing and externalizing from the Personality Assessment Inventory: The impact of method variance and suppressor effects. *Psychological assessment*, 22, 96-107.  
<https://psycnet.apa.org/doi/10.1037/a0017240>
- (3) Boduszek, D. & Debowska., A. (2016). Critical evaluation of psychopathy measurement (PCL-R and SRP-III/SF) and recommendations for future research. *Journal of Criminal Justice*, 44, 1-12.
- (4) Boduszek, D., Debowska, A., Dhingra, K., & DeLisi, M. (2016). Introduction and validation of Psychopathic Personality Traits Scale (PPTS) in a large prison sample. *Journal of Criminal Justice*, 46, 9-17.
- (5) Cale, E. M., & Lilienfeld, S. O. (2002). Sex differences in psychopathy and antisocial personality disorder: A review and integration. *Clinical psychology review*, 22, 1179-1207. [https://doi.org/10.1016/S0272-7358\(01\)00125-8](https://doi.org/10.1016/S0272-7358(01)00125-8)
- (6) Campbell, M. A., French, S., & Gendreau, P. (2009). The prediction of violence in adult offenders: A meta-analytic comparison of instruments and methods of assessment. *Criminal Justice and Behavior*, 36, 567-590.  
<https://doi.org/10.1177%2F0093854809333610>
- (7) Cleckley, H. (1941). *The mask of sanity*. St. Louis, MO: Mosby.
- (8) Cleckley, H. (1976). *The mask of sanity (5th edition)*. St. Louis, MO: Mosby.
- (9) Cooke, D. J., Michie, C., Hart, S. D., & Clark, D. A. (2004). Reconstructing psychopathy: Clarifying the significance of antisocial and socially deviant behavior in the diagnosis of psychopathic personality disorder. *Journal of personality disorders*, 18, 337-357. <https://doi.org/10.1521/pedi.2004.18.4.337>
- (10) Cooke, D. J., Michie, C., & Skeem, J. (2007). Understanding the structure of the Psychopathy Checklist—Revised: An exploration of methodological confusion. *The British Journal of Psychiatry*, 190, s39-s50. <https://doi.org/10.1192/bjp.190.5.s39>
- (11) Forth, A. E., Kosson, D. S., & Hare, R. D. (2003). *Hare psychopathy checklist: Youth version*. New York: Multi-Health Systems.
- (12) Gray, N. S., Hill, C., McGleish, A., Timmons, D., MacCulloch, M. J., & Snowden, R. J. (2003). Prediction of violence and self-harm in mentally disordered offenders: A prospective study of the efficacy of HCR-20, PCL-R, and psychiatric symptomatology. *Journal of consulting and clinical psychology*, 71, 443-451.  
<https://psycnet.apa.org/doi/10.1037/0022-006X.71.3.443>
- (13) Jackson, R. L., & Richards, H. J. (2007). Psychopathy and the five factor model: Self and therapist perceptions of psychopathic personality. *Personality and Individual Differences*, 43, 1711-1721. <https://doi.org/10.1016/j.paid.2007.05.009>
- (14) Jones, D. N., & Paulhus, D. L. (2014). Introducing the short dark triad (SD3) a brief measure of dark personality traits. *Assessment*, 21, 28-41.  
<https://doi.org/10.1177%2F1073191113514105>
- (15) Jonason, P. K., & Webster, G. D. (2010). The dirty dozen: a concise measure of the dark triad. *Psychological Assessment*, 22, 420-432.  
<https://psycnet.apa.org/doi/10.1037/a0019265>
- (16) Hall, J. R., Drislane, L. E., Patrick, C. J., Morano, M., Lilienfeld, S. O., & Poythress, N. G. (2014). Development and validation of Triarchic construct scales from the psychopathic personality inventory. *Psychological assessment*, 26, 447-461.  
<https://psycnet.apa.org/doi/10.1037/a0035665>
- (17) Hare, R. D. (2003). *The Hare Psychopathy Checklist—Revised, 2nd edition*. Toronto, ON, Canada: Multi-Health Systems.

- (18) Hare, R. D., & Neumann, C. S. (2009). Psychopathy and its measurement. In P. J. Corr & G. Matthews (Eds): *Cambridge handbook of personality psychology* (pp. 660-686). Cambridge: Cambridge University Press.
- (19) Harpur, T. J., Hakstian, A. R., & Hare, R. D. (1988). Factor structure of the Psychopathy Checklist. *Journal of consulting and clinical psychology, 56*, 741-747. <https://psycnet.apa.org/doi/10.1037/0022-006X.56.5.741>
- (20) Hart, S. D., Cox, D. N., & Hare, R. D. (1995). *Hare psychopathy checklist: Screening version (PCL: SV)*. Toronto, Ontario, Canada: Multi-Heath Systems.
- (21) Hu, L. T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural equation modeling: a multidisciplinary journal, 6*, 1-55. <https://doi.org/10.1080/10705519909540118>
- (22) Jones, D. N., & Paulhus, D. L. (2014). Introducing the short dark triad (SD3) a brief measure of dark personality traits. *Assessment, 21*, 28-41. <https://doi.org/10.1177%2F1073191113514105>
- (23) Kujačić, D., Mededović, J., & Knežević, G. (2015). The relations between personality traits and psychopathy as measured by ratings and self-report. *Psihologija, 48*, 45-59. <https://doi.org/10.2298/PSI1501045K>
- (24) Leistico, A. M. R., Salekin, R. T., DeCoster, J., & Rogers, R. (2008). A large-scale meta-analysis relating the Hare measures of psychopathy to antisocial conduct. *Law and human behavior, 32*, 28-45. <https://doi.org/10.1007/s10979-007-9096-6>
- (25) Levenson, M. R., Kiehl, K. A., & Fitzpatrick, C. M. (1995). Assessing psychopathic attributes in a noninstitutionalized population. *Journal of personality and social psychology, 68*, 151-158. <https://psycnet.apa.org/doi/10.1037/0022-3514.68.1.151>
- (26) Lilienfeld, S. O., & Andrews, B. P. (1996). Development and preliminary validation of a self-report measure of psychopathic personality traits in noncriminal population. *Journal of personality assessment, 66*, 488-524. [https://doi.org/10.1207/s15327752jpa6603\\_3](https://doi.org/10.1207/s15327752jpa6603_3)
- (27) MacNeil, B. M., & Holden, R. R. (2006). Psychopathy and the detection of faking on self-report inventories of personality. *Personality and Individual Differences, 41*, 641-651. <https://doi.org/10.1016/j.paid.2006.03.004>
- (28) Mededović, J. (2015). *Nomološka mreža psihopatije*. Institut za kriminološka i sociološka istraživanja: Beograd [*Nomological network of psychopathy*. Institute of Criminological and Sociological Research: Belgrade].
- (29) Mededović, J., Bulut, T., Savić, D., & Đuričić, N. (2018). Delineating psychopathy from cognitive empathy: The case of Psychopathic Personality Traits Scale. *European journal of analytic philosophy, 14*, 53-62. <https://doi.org/10.31820/ejap.14.1.3>
- (30) Mededović, J., & Damjanović, A. (2018). Measuring psychopathy via small sample of TriPM items. *Zbornik Instituta za kriminološka i sociološka istraživanja, 37*(1), 7-22.
- (31) Mededović, J. & Petrović, B. (2018). Short Psychopathy Rating Scale (SPRS): Preliminary validation results. *Proceedings of the XXIV scientific conference Empirical studies in psychology, 6*, 24-28.
- (32) Mededović, J., Petrović, B., Kujačić, D., Đorić, J. Ž., & Savić, M. (2015). What is the optimal number of traits to describe psychopathy?. *Primenjena Psihologija, 8*, 109-130. <https://doi.org/10.19090/pp.2015.2.109-130>
- (33) Mededović, J., Wertag, A., & Sokić, K. (2018). Can psychopathic traits be adaptive? Sex differences in relations between psychopathy and emotional distress. *Psihologijske teme, 27*, 481-497. <https://doi.org/10.31820/pt.27.3.7>

- (34) Miller, J. D., Jones, S. E., & Lynam, D. R. (2011). Psychopathic traits from the perspective of self and informant reports: Is there evidence for a lack of insight? *Journal of Abnormal Psychology, 120*, 758-764. <https://psycnet.apa.org/doi/10.1037/a0022477>
- (35) Patrick, C. J., Fowles, D. C., & Krueger, R. F. (2009). Triarchic conceptualization of psychopathy: Developmental origins of disinhibition, boldness, and meanness. *Development and psychopathology, 21*, 913-938. <https://doi.org/10.1017/S0954579409000492>
- (36) Paulhus, D. L., & Williams, K. M. (2002). The dark triad of personality: Narcissism, Machiavellianism, and psychopathy. *Journal of research in personality, 36*, 556-563. [https://doi.org/10.1016/S0092-6566\(02\)00505-6](https://doi.org/10.1016/S0092-6566(02)00505-6)
- (37) Paulhus, D. L., Neumann, C. S., & Hare, R. D. (2016). *Manual for the Self-Report Psychopathy Scale*. Toronto, Ontario: Multi-Health Systems.
- (38) Porter, S., Ten Brinke, L., & Wallace, B. (2012). Secrets and lies: Involuntary leakage in deceptive facial expressions as a function of emotional intensity. *Journal of Nonverbal Behavior, 36*, 23-37. <https://doi.org/10.1007/s10919-011-0120-7>
- (39) Poythress, N. G., Lilienfeld, S. O., Skeem, J. L., Douglas, K. S., Edens, J. F., Epstein, M., & Patrick, C. J. (2010). Using the PCL-R to help estimate the validity of two self-report measures of psychopathy with offenders. *Assessment, 17*, 206-219. <https://doi.org/10.1177%2F1073191109351715>
- (40) Rammstedt, B., & John, O. P. (2007). Measuring personality in one minute or less: A 10-item short version of the Big Five Inventory in English and German. *Journal of research in Personality, 41*, 203-212. <https://doi.org/10.1016/j.jrp.2006.02.001>
- (41) Ray, J. V., Hall, J., Rivera-Hudson, N., Poythress, N. G., Lilienfeld, S. O., & Morano, M. (2013). The relation between self-reported psychopathic traits and distorted response styles: A meta-analytic review. *Personality Disorders: Theory, Research, and Treatment, 4*, 1-14. <https://psycnet.apa.org/doi/10.1037/a0026482>
- (42) Robins, R. W., Hendin, H. M., & Trzesniewski, K. H. (2001). Measuring global self-esteem: Construct validation of a single-item measure and the Rosenberg Self-Esteem Scale. *Personality and social psychology bulletin, 27*, 151-161. <https://doi.org/10.1177%2F0146167201272002>
- (43) Sellbom, M., Laurinavičius, A., Ustinavičiūtė, L., & Laurinaitytė, I. (2018). The Triarchic Psychopathy Measure: An examination in a Lithuanian inmate sample. *Psychological assessment, 30*, e10-e20. <http://dx.doi.org/10.1037/pas0000603>
- (44) Venables, N. C., Hall, J. R., & Patrick, C. J. (2014). Differentiating psychopathy from antisocial personality disorder: A triarchic model perspective. *Psychological medicine, 44*, 1005-1013. <https://doi.org/10.1017/S003329171300161X>
- (45) Vitacco, M. J., Neumann, C. S., & Woduschek, T. (2008). Differential relationships between the dimensions of psychopathy and intelligence: Replication with adult jail inmates. *Criminal Justice and Behavior, 35*, 48-55. <https://doi.org/10.1177%2F0093854807309806>
- (46) Warren, G. C., & Clarbour, J. (2009). Relationship between psychopathy and indirect aggression use in a noncriminal population. *Aggressive Behavior: Official Journal of the International Society for Research on Aggression, 35*, 408-421. <https://doi.org/10.1002/ab.20317>
- (47) Woodworth, M., & Porter, S. (2002). In cold blood: Characteristics of criminal homicides as a function of psychopathy. *Journal of abnormal psychology, 111*, 436-445. <https://psycnet.apa.org/doi/10.1037/0021-843X.111.3.436>

## DALJI RAZVOJ KRATKE SKALE ZA REJTING PROCENU PSIHO PATIJE

*U ovom tekstu prikazujemo dalji rad na razvoju Kratke Skale za Rejting Procenu Psihopatije (Short Psychopathy Rating Scale: SPRS), deveto-ajtemskog instrumenta za ispitivanje tri psihopatske karakteristike: Obmanjivanja, Emocionalne hladnoće i Nesmotrenosti. Administrirali smo ovaj upitnik na uzorku od 210 studenata (76% ženskih ispitanika,  $M_{uzrast}=21.21$ ;  $SD=2.10$ ) koji su procenjivali njihove roditelje na psihopatskim karakteristikama. Analize su izvršene na 373 ispitanika (54% žena,  $M_{uzrast}=51.47$ ;  $SD=5.91$ ). Izračunali smo  $\alpha$  koeficijent Kronbaha i saradnika kao kao meru pouzdanosti skale, testirali latentnu strukturu skale pomoću Konfirmatorne Faktorske Analize i ispitali relacije SPRS skale sa merama iz Trijarhijskog modela psihopatije (TriPM, koji meri tri psihopatske karakteristike - Zlobu, Smelost i Dezinhibiciju). SPRS skale psihopatije su pokazale zadovoljavajuće pouzdanosti obzirom da se sve tri skale sastoje od po tri ajtema (koeficijenti pouzdanosti su bili u rangu od .60 do .68). Konfirmatorna Faktorska Analiza je pokazala da SPRS model dobro opisuje opservirane podatke:  $\chi^2(24)=85.57$ ;  $p<.01$ ;  $NFI=.88$ ;  $CFI=.91$ ;  $RMSEA=.078$ . Očekivane polne razlike na psihopatskim crtama su takođe detektovane - muškarci su imali značajno više skorove na svim psihopatskim crtama. Na kraju, validnost SPRS skale je utvrđena dobijenim relacijama između SPRS i TriPM instrumenta: Obmanjivanje je pozitivno asociralo sa Smelošću, skorovi na Emocionalnoj hladnoći su bili pozitivno povezani sa Zlobom a na Nesmotrenosti sa Dezinhibicijom, kako je bilo i pretpostavljeno. U globalu, SPRS mere su pokazale zadovoljavajuće pouzdanosti, adekvatnu faktorsku strukturu i odličnu konvergentnu i divergentnu validnost. Međutim, i dalje postoji prostor za unapređivanje instrumenta, pogotovo u domenu pouzdanosti skale.*

*KLJUČNE REČI: psihopatija / rejting metod / validnost /  
faktorska struktura / pouzdanost*